NOVEMBER/DECEMBER 2025

23USC51 — PYTHON PROGRAMMING

Shanmuga Industries Arts & Science College
T.V.Malai

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define literals in Python.
2. Give two examples of type conversion in Python.
3. List the different types of control statements in Python.
4. Write syntax of a for loop in Python.
5. Define recursion with an example.
6. Differentiate between local and global variables.
7. List any two differences between lists and tuples.
8. What is the use of dictionary keys()?
9. Write the syntax to open and close a file.
10. Give an example of file deletion in Python.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Explain various built-in data types in Python with examples.

Or

(b) Discuss different types of operators in Python with examples.

12. (a) Illustrate the usage of else clause in loops with an example.

Or

(b) Compare if-elif-else ladder with nested if statements.

13. (a) Explain different types of function arguments with examples.

Or

(b) Write a program to count vowels and consonants in a string.

14. (a) Explain basic list operations with examples.

Or

(b) Write a Python program to reverse a tuple.

15. (a) Discuss the difference between write() and writelines().

Or

(b) Write a program to count the number of words in a text file.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Design a simple calculator program in Python using operators and input statements.

17. Write a Python program to find all prime numbers within a given range using loops.

18. Discuss in detail the structure of a Python module and how to import custom modules.

19. Compare the efficiency of lists, tuples, and dictionaries in Python.

20. Evaluate the advantages and disadvantages of Python file handling techniques.

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